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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,069

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Karin Golz-Berner

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05/05/2010

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EXAMINER

SHOMER, ISAAC

ART UNIT

PAPER NUMBER

1612

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,069	<b>Applicant(s)</b> GOLZ-BERNER ET AL.	
	<b>Examiner</b> ISAAC SHOMER	<b>Art Unit</b> 1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group I, claims 11-17 in the reply filed on 17 March 2010 is acknowledged.

Claims 18-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 17 March 2010.

Applicant's election without traverse of the species of barium hexaferrite single crystals in the reply filed on 17 March 2010 is acknowledged.

### ***Claim Rejections - 35 USC § 112 2<sup>nd</sup> Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat.

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App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 11 recites the broad recitation "samarium-cobalt particles", and the claim also recites SmCo (which shows an equivalent stoichiometry) which is the narrower statement of the range/limitation. In the present instance, claim 11 recites the broad recitation "neodymium-iron-boron particles", and the claim also recites Nd<sub>2</sub>Fe<sub>14</sub>B which is the narrower statement of the range/limitation. In the present instance, claim 16 recites the broad recitation which is the Markush group consisting of PTFE, fluoroethylenepropylene etc., and the claim also recites "preferably PTFE" which is the narrower statement of the range/limitation.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golz-Berner et al. (WO 00/76458 A2) in view of Zastrow et al. (US Patent 5,961,988), Roller (US Patent 4,857,306) and Graf et al. (US Patent 5,069,918).

Golz-Berner et al. (WO 00/76458 A2) is in German, but US Patent 6,551,606 appears to be an English translation. As such, all column and line citations are to the US patent, but all material cited is assumed to be present in the WIPO document.

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Golz-Berner et al. (hereafter referred to as Golz-Berner) teaches a cosmetic product which may comprise barium hexaferrite single crystals with high coercivity and a particle size of 100-1200 nm, as of Golz-Berner, column 4 lines 47-57. Liposomes and asymmetric lamellar carriers with phospholipids are suggested as of Golz-Berner, column 4 lines 21-30. Inclusion of fluorocarbons or fluorocarbon aggregates for penetration into the skin is suggested as of Golz-Berner, column 4 lines 40-46. The inclusion of colorants and pigments as cosmetic auxiliary agents is suggested as of Golz-Berner, column 2 lines 32-34, and ceramic particles are specifically taught as coloring agents as of Golz-Berner, column 5 lines 1-10. Inclusion of the cosmetic product into hair agents is suggested as of Golz-Berner, column 6 lines 17-21. Utility in transporting oxygen is suggested as of Golz-Berner, column 4 lines 21-25.

Golz-Berner does not teach jade nanoparticles with the size of 50-95 nm. Golz-Berner further does not teach the coercive field strength of the barium hexaferrite nanoparticles or the percentage in which they are included in the composition.

Zastrow et al. (hereafter referred to as Zastrow) teaches a cosmetic and dermatological preparation comprising magnetically hard particles of barium hexaferrite single crystals with a particle size in the range of 80 nm and 550 nm, as of Zastrow, abstract. Said particles have a coercive field strength of 1000 to 20,000 Oersteds (which is equivalent to about 7960 to 1,592,000 Amperes per meter)<sup>1</sup>, as of Zastrow, abstract. Encapsulation of barium hexaferrite single crystals in an amount of 0.01% to 10% by weight is taught by Zastrow, column 2 lines 33-37. Encapsulation in aqueous liposomes

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<sup>1</sup> 1 Oersted = 79.6 A/m, as of Chestider (US Patent 6,310,471), column 10 line 14.

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or asymmetric lamellar aggregates or mixtures is suggested as of Zastrow, column 1 lines 45-51. Loading with oxygen to the saturation limit is suggested by Zastrow, abstract. Incorporation of various highly fluorinated compounds, including the broad class of aliphatic and highly linear fluoralkanes, is suggested as of Zastrow, column 2 line 58 to column 3 line 12, wherein said fluorocarbons are capable of transporting gases such as oxygen and carbon dioxide, as of Zastrow, column 2 lines 58-62. Inclusion of kaolin (a clay) is suggested as of Zastrow, column 3 lines 34-40.

It would have been prima facie obvious for one of ordinary skill in the art to have included barium hexaferrite nanoparticles at the field strength of 7960 to 1,592,000 Amperes per meter and in an amount of 0.01% to 10%, as of Zastrow, in the composition of Golz-Berner. This is because the both the composition of Zastrow and that of Golz-Berner appears useful for transporting oxygen. As Golz-Berner teaches the specific ingredients but does not teach an amount present or a specific coercivity, the skilled artisan would have been motivated to look to Zastrow to have predictably determined the appropriate proportion and coercivity of said barium hexaferrite nanoparticles for effectiveness in oxygen transport with a reasonable expectation of success. The use of a known technique (incorporation of barium hexaferrite in a specific range and at a specific coercivity) to improve similar devices (those of Golz-Berner and Zastrow) in the same way is prima facie obvious. See MPEP 2143, Exemplary Rationale C.

The above references do not teach jade stone particles, wherein said particles have sizes of 50-95 nm in a concentration of 0.001% to 0.05%.

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Roller teaches the incorporation of jade and nephrite in cosmetics, as of Roller, column 2 lines 31 and 32. Incorporation in a concentration of up to 10% is taught as of Roller, claim 2. Said components are useful as colorants in topically applied facial cosmetics, as of Roller, column 1 lines 10-17. Additionally, tourmaline is also suggested, as of Roller, column 2 lines 34-35, as is malachite, as of Roller, column 2 lines 31-32.

It would have been *prima facie* obvious for one of ordinary skill in the art to have combined the jade or nephrite particles, as of Roller, with the cosmetic composition of the above references. The particles of Roller would have provided color to a topical cosmetic composition. As jade nanoparticles are known for the intended use of colorants, and Golz-Berner suggests the inclusion of a colorant (wherein said colorant may be a ceramic particle), the skilled artisan would have been motivated to have added jade particles to have predictably provided color to the composition of the above references with a reasonable expectation of success. Generally, it is *prima facie* obvious to select a known material for incorporation into a composition, based on its recognized suitability for its intended use. See MPEP 2144.07.

Roller does not teach particles in the size range of 50 nm to 95 nm.

Graf et al. (hereafter referred to as Graf) teaches that reflectance decreases with an increase in particle size, because the path length of light through a particle increases as the particle increases in size, providing greater opportunity for light to be absorbed, (and as such less light is reflected), as of Graf, column 9 lines 26-40.



It would have been *prima facie* obvious for one of ordinary skill in the art to have decreased the particle sizes of the particles of Roller. This is because Roller suggests that an increase in reflectivity is desired in a topical cosmetic, as of Roller, column 1 lines 31-36, and Graf teaches a method by which particles can reflect more light. As such, the skilled artisan would have been motivated to have decreased the particle sizes of the particles used by Roller to have predictably increased reflectance with a reasonable expectation of success. The application of a known technique (decreasing particle size to improve reflectance) to a known device (the jade nanoparticles of Roller) for improvement to yield predictable results is *prima facie* obvious. See MPEP 2143, Exemplary Rationale D.

The concentration of jade particles, which is taught to be up to 10% by Roller, does not read on but does overlap with the instantly claimed concentration range. The concentration of barium hexaferrite crystals, the particle size of said crystals, and the coercive force also overlaps with that instantly claimed. While the prior art does not disclose the exact claimed values, but does overlap: in such instances even a slight overlap in range establishes a *prima facie* case of obviousness. In re Peterson, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003).

### ***Conclusion***

No claim is allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ISAAC SHOMER whose telephone number is (571)270-7671. The examiner can normally be reached on 8:00 AM - 5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick F. Krass can be reached on (571)272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. S./

Examiner, Art Unit 1612

/Frederick Krass/

Supervisory Patent Examiner, Art Unit 1612